# Pears in a Basket

**Reporting Category**  Computation and Estimation

**Topic**  Dividing whole numbers

**Primary SOL**  4.4  The student will

c) divide whole numbers, finding quotients with and without remainders.

**Materials**
- Base-10 blocks
- Variety of other manipulatives (e.g., linking cubes, colored tiles)

**Vocabulary**
*divide, divisor, dividend, quotient, estimate, estimation, remainder*

**Student/Teacher Actions (what students and teachers should be doing to facilitate learning)**

1. Present the following word problem to the class: "Ann has a pear tree in her back yard. The tree produces beautiful pears each year, and Ann likes to share the pears with her three neighbors. So, Ann picked a basketful of pears, 57 in all! She decided not to keep any for herself this time, but to use all the pears to make pear baskets for her neighbors, putting the same number of pears in each basket. How many pears did each person receive?"

2. First, ask students to estimate how many pears each neighbor got. Then, have students use a variety of manipulatives to model the solution. Observe students as they use the manipulatives, and have them write or illustrate how they used them. Make certain that students reach the conclusion that the number of pears divided by the number of baskets equals the number of pears each person received. You may want to illustrate this on the board as: "# of pears ÷ # of baskets = # of pears per person."

3. Ask whether anyone's estimation resulted in there being any pears left over, and ask what such a leftover is called. Have students compare their estimates to the actual number of pears that each person received and note how close their estimates were.

**Assessment**
- **Questions**
    - If Ann had decided to include herself in the sharing of the pears, how many pears would each of the four people have received?
    - If Ann had included another friend in the sharing, how many pears would each of the five people have received?
- **Journal/Writing Prompts**
    - Illustrate your solution in your journal. Give a written explanation of your thinking.
    - Write a problem like this for a friend to solve. Be sure that you can solve the problem yourself first.

**Extensions and Connections (for all students)**
- Ask students to create division problems that relate to a variety of different numbers.
- Have students use pictures, numbers, and words and create their own story problem like the one shared.

**Strategies for Differentiation**
- Provide "pears" and "baskets" (real or representational) for students to physically divide the pears.
- Begin with smaller numbers with no remainders (e.g., 30) for students to calculate. Move toward numbers with remainders.
- Have students' group manipulatives by the value of the divisor instead of the divvy up method. For example, when using 3 as a divisor, have students' group cubes by threes to determine the number of equal groups of 3 and then remainders.